

## **REMARKS**

### **I. Status of the Claims**

Claims 1 through 11 are pending.

Claim 11 has been cancelled.

Claims 1 through 11 stand rejected.

### **II. Amendments**

The Specification has been amended to insert a Brief Description of the Drawings. Support for this amendment is found throughout the Specification with particular reference to page 4, third paragraph, line 1.

Claim 1 has been amended to recite that the paper web extends from a paper screen to a first winding reel. Support for this amendment is found throughout the specification with particular reference to Fig. 1. This amendment is to the condition wherein the paper web remains as a single intact strip and has not yet been cut.

Claim 1 has been further amended to recite that the paper web extends from a paper screen to a first winding reel and is in the drying portion of the process at printing and, hence, still wet. As amended the claim recites a moisture content of from about 2% to about 60%. Support for this amendment is found throughout the Specification with particular reference to page 4, third paragraph (line 4) where a "dry content" of about 40% entails a water content of about 60% and line 7 wherein a moisture low of about 2% is stated.

Claim 10 has been amended to incorporate the limitations of Claim 11. Claim 11 has been cancelled.

No new matter has been added.

### III. Specification

The Specification has been objected to as failing to present a Brief Description of the Drawings. This has been inserted before the Detailed Description Of The Invention. As amended, this objection is met.

### IV. Rejection under 35 U.S.C. §§ 102

Claims 1 through 4, and 6 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Pat. No. 5,849,153 to Ishino ("Ishino"). This rejection is respectfully traversed.

In rejecting Claims 1 through 4, the Examiner cites Ishino as disclosing the formation of a paper sheet and the printing of a coating layer made of water soluble polymer solution. The Examiner presents the polymer as including polysaccharides and the printing as performed at 90°C, and occurring prior to storage.

#### A. Applicants' Claimed Invention

Claim 1 is independent, and Claims 4 through 6 are dependent thereon.

As amended, Claim 1 is drawn to a process for the production of cigarette paper printed upon in pattern form which is impregnated in strip form with fire-inhibiting materials, wherein printing is effected with an aqueous printing solution on a self-supporting paper web wherein the paper web is extending from a paper screen to a first winding reel and the printing solution contains water-soluble polymers and the paper is heated to a temperature of over 50°C prior to or during the printing operation, wherein the operation of printing on the paper is effected after it has left the paper screen and the press portion of a paper machine and is in the drying portion wherein the paper has a moisture content of from about 2% to about 60%, but before the paper web is rolled up.

#### B. The Disclosure of Ishino

Ishino discloses water dispersible sheet comprising a water-resolvable base paper and a water-dispersible coating layer which comprises a water-soluble polymer to reduce the air permeability. Ishino discloses sheets having high water-dispensability to break down in

rainwater in natural environment. Ishino further discloses an impregnation treatment of the paper web.

C. The Deficiency of Ishino

Ishino does not disclose the claimed process steps of

- (i) production of cigarette paper printed upon in pattern form which is impregnated in strip form with fire-inhibiting materials
- (ii) a process, wherein printing is effected on a self-supporting paper web with a the paper web is extending from a paper screen to a first winding reel, or
- (iii) printing on the paper after it has left the paper screen and the press portion of a paper machine and is in the drying portion
- (iv) and wherein the paper in the drying portion of the process has a moisture content of from about 2% to about 60%.

As to Claim 6, the Examiner cites Ishino's used of base paper of 15-80 gm/m<sup>2</sup>. Applicant's Claim 6 is drawn to paper of a base weight of 15 - 40 g/m<sup>2</sup>. However, Claim 6, incorporating the distinguishing limitations of Claim 1 is not anticipated by Ishino.

Thus Ishino does not anticipate claim 1 as amended or claims 2 through 4 or 6 dependent thereon.

V. **Rejections under 35 U.S.C. § 103(a)**

Claims 1 through 4, and 6 stand rejected under 35 U.S.C. § 103(a) as being obvious over Ishino. This rejection is respectfully traversed

In rejecting Claims 1 through 4, the Examiner cites Ishino as disclosing the formation of a paper sheet and the printing of a coating layer made of water soluble polymer solution. The Examiner presents the polymer as including polysaccharides and the printing as performed at 90°C, and occurring prior to storage.

A. Applicants' Claimed Invention

As noted above, Claim 1 is drawn to a process for the production of cigarette paper printed upon in pattern form which is impregnated in strip form with fire-inhibiting materials,

wherein printing is effected with an aqueous printing solution on a self-supporting paper web wherein the paper web is extending from a paper screen to a first winding reel and the printing solution contains water-soluble polymers and the paper is heated to a temperature of over 50°C prior to or during the printing operation, wherein the operation of printing on the paper is effected after it has left the paper screen and the press portion of a paper machine and is in the drying portion wherein the paper has a moisture content of from about 2% to about 60%, but before the paper web is rolled up.

C. The Deficiency of Ishino

Unlike the claimed invention, the teaching of Ishino appears to confirm that printing occurs after paper formation has been completed. The Examiner's attention is respectfully directed Ishino to col. 10, lines 64 to 67 wherein the surface coating or the impregnation treatment calendaring is carried out as required for improvement of the smoothness or the printability and decrease of the air permeability. Similarly, col. 12, lines 31 to 48 and lines 54 to 62 note that the paper making process to gain a water-dispersible sheet is already completed when the printing process is carried out.

Nothing in Ishino teaches or suggests the claimed process steps of

- (i) production of cigarette paper printed upon in pattern form which is impregnated in strip form with fire-inhibiting materials
- (ii) a process, wherein printing is effected on a self-supporting paper web wherein the paper web is extending from a paper screen to a first winding reel, or
- (iii) printing on the paper after it has left the paper screen and the press portion of a paper machine and is in the drying portion
- (iv) and wherein the paper in the drying portion of the process has a moisture content of from about 2% to about 60%.

As to Claim 6, the Examiner cites Ishino's used of base paper of 15-80 gm/m<sup>2</sup>. Applicant's Claim 6 is drawn to paper of a base weight of 15 - 40 g/m<sup>2</sup>. However, Claim 6, incorporating the distinguishing limitations of Claim 1 is not obviated by Ishino. Nothing in

Ishino teaches or suggest the process of applying the above-noted process steps to paper of this weight.

Thus Ishino does not render obvious Claim 1 as amended or claims 2 through 4, or 6 dependent thereon.

**VI. Rejections under 35 U.S.C. § 103(a)**

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishino in view of U.S. Patent No. 6,779,530 to Kraker ("Kraker"). This rejection is respectfully traversed.

**A. The Rejection**

The Rejection reiterates the application of Ishino and notes that Ishino fails to disclose printing solution viscosity. Kraker is cited as providing the claimed viscosity.

**B. Applicants' Invention**

Dependent claim 5 is drawn to a process using a printing solution of a viscosity of a maximum of 4000 mPa · s at 20° C. And, of course, these claims incorporate the limitations of Claim 1.

**C. The Deficiency of Ishino**

Ishino is silent as to viscosity.

**D. The Deficiency of Kraker**

Kraker does not teach or suggest coating paper with the claimed (or any) water content. Kraker specifically coats the paper prior to drying. "... *after* leaving the gravure printing arrangement 44, the paper web 14 is passed through the drying operation 62. Kraker, col. 8, lines 48-50 (emphasis added). Applicant specifically claims printing during drying.

As to the disclosure of viscosity in Kraker, nothing in Kraker teaches or suggests that the viscosity of Kraker would be applicable to the process of Applicant wherein drying occurs along with coating. The Examiner's attention is respectfully drawn to Kraker, Fig. 3. In Fig. 3 Kraker

shows printing on a paper layer (14) which is unwound from a supply roll 40 (see column 8, lines 16 and 17). This implicates that the paper making process is already completed, when the printing is done.

Applicants respectfully submit that this rejection is improper and should be withdrawn.

**VII. Rejections under 35 U.S.C. § 103(a)**

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishino in view of U.S. Patent No. 5,496,626 to Hamajima ("Hamajima"). This rejection is respectfully traversed.

**A. The Rejection as to Claim 7**

The Rejection reiterates the application of Ishino and notes that Ishino fails to disclose absorption rate. Hamajima is cited as providing the claimed absorption rate (col. 7, lines 44-55).

**B. The Deficiency of Hamajima**

It is stressed that Claim 1, and all claims dependent thereon are drawn to cigarette paper. Claim 7, thus claims cigarette paper with an absorption height of 6 - 15 mm/10 min. Hamajima addresses absorbent paper described as "bulky cellulose fiber" (e.g., col. 3, line 30.) and sanitary napkins (col. 7 lines 47-55). This is not cigarette paper. The Examiner's statement that one of ordinary skill would have combined teachings of Ishino coating directed to thin cigarette paper and uncoated absorbent pads of Hamajima is unsupported.

Applicants respectfully submit that this rejection is improper and should be withdrawn.

**C. The Rejection as to Claim 8**

Hamajima is cited as providing the claimed absorption rate after 10 minutes.

**D. The Deficiency of Hamajima**

It is stressed that Claim 1, and all claims dependent thereon are drawn to cigarette paper. Claim 8, thus claims cigarette paper with an absorption height of 8 - 13mm/10 min.. Hamajima addresses absorbent paper described as "bulky cellulose fiber" (e.g., col. 3, line 30.) and sanitary napkins (col. 7 lines 47-55). This is not cigarette paper. The Examiner's statement

that one of ordinary skill would have combined teachings of Ishino coating directed to thin cigarette paper and uncoated absorbent pads of Hamajima is unsupported and without logic.

Applicants respectfully submit that this rejection is improper and should be withdrawn.

**VIII. Rejections under 35 U.S.C. § 103(a)**

Claims 9 through 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishino in view of Hamajima, and further in view of Kraker. This rejection is respectfully traversed.

**A. The Rejection as to Claim 9**

As to Claim 9, the Examiner cites Ishino in view of Hamajima as applied above, but failing to disclose the roller serving as backing support. Kraker is cited as disclosing roller backing. The Examiner finds obviousness in combining Ishino with Hamajima and Kraker

**B. Applicants Claimed Invention**

Claim 9 is drawn to the contact dryer for the paper web serving as a backing support *during printing*.

**C. The deficiency of Ishino, Hamajima and Kraker**

The three cited references, alone or in combination, fail to disclose applicants claimed invention for the reasons cited above. Furthermore, as to the limitation of dryer backing support *during printing*, none of the cited references print during drying. This process step is wholly the invention of the Applicant. It is further inconsistent with the teaching of Hamajima. Thus the combination of Ishino, Hamajima, and Kraker is improper and will still not arrive at the claimed invention.

Applicants request that this rejection be withdrawn.

**D. The Rejection as to Claim 10 (now combined with Claim 11).**

The rejection is based on entire width of paper being coated as disclosed and reduced ignition is attributed to Kraker.

E. Applicants' Invention

Claims 10/11 depend from Claim 1. As such, the coating process occurs during drying. Claim 10 further requires that during the printing operation the paper web is impregnated over its entire surface area with an aqueous solution, and claims the coating aqueous solution contain fire-promoting means.

F. The Deficiency of Ishino in view of Hamajima and Kraker

Applicants restate the deficiencies of Ishino, Hamajima and Kraker as noted above.

As to Claim 10, this claim requires that the entire surface area be coated with an aqueous solution. As the Examiner has observed, Kraker is drawn to a reduced ignition cigarette paper, and in that regard, Kraker necessarily coats only parts of the paper. It would be contraindicated to coat the entire paper in Kraker. The Examiner suggestion that the partial coating of Kraker renders obvious the full coating of Claim 10 is improper hindsight reconstruction of Applicants' invention in the light of Applicants' disclosure. As to the limitation of coating aqueous solution containing fire-promoting means, Again, this is the obverse of Kraker's reduced ignition means. And Hamajima, as related to absorbent and thick papers offers no teaching to an invention related to cigarette papers.

Applicants respectfully request that these rejections be withdrawn.



**CONCLUSION**

In view of the above, reconsideration and allowance of this application are believed to be in order, and such action is hereby solicited. If any points remain an issue which the Examiner feels may be best resolved through a telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below. The Examiner is invited and encouraged to telephone the undersigned with any concerns in furtherance of the prosecution of the present application.

Please charge any deficiency as well as any other fee(s) which may become due at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 50-2896.

Respectfully submitted,



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Dated:

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